

Appln. No. 10/065,486
Docket No. 124695/GEM-0058

REMARKS / ARGUMENTS

Status of Claims

Claims 1-17 and 21-28 are pending in the application and stand rejected. Applicant has amended Claims 1, 9, 15 and 21, leaving Claims 1-17 and 21-28 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §101, 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Rejections Under 35 U.S.C. §101

Claims 9-14 stand rejected under 35 U.S.C. §101, because the claimed invention is allegedly directed to non-statutory subject matter. The Examiner provides suggestions as to how the claims may be amended to overcome this rejection. Applicant appreciates the Examiner's suggestions.

Applicant has adopted the suggestions provided by the Examiner and has amended Claim 9 accordingly and as set forth above.

As such, Applicant submits that Claims 9-14 comply with the statutory subject matter requirements of 35 U.S.C. §101, and respectfully requests reconsideration and withdrawal of this rejection, which Applicant considers to be traversed.

Rejections Under 35 U.S.C. §102(b)

Claims 1, 3, 4, 6, 7, 9, 11-15, 21, 24, 26 and 27 stand rejected under 35 U.S.C. §102(b) as being anticipated by Barni (U.S. Patent No. 6,473,634, hereinafter Barni).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he

Appln. No. 10/065,486
Docket No. 124695/GEM-0058

identical invention must be shown in as complete detail as is contained in the *** claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Regarding Independent Claims 1, 9, 15 and 21

Applicant has amended Claims 1, 9, 15 and 21, to now recite, inter alia,

“...processing said target area by subdividing said target area so as to create a plurality of sub-target areas of interest...”

No new matter has been added as antecedent support may be found in the specification as originally filed, such as at Paragraph [0045] for example.

Dependent claims inherit all of the limitations of the respective parent claim.

While Applicant believes that the original claim language particularly and distinctly defined the invention such that one skilled in the art would understand the scope of the invention claimed, Applicant has nonetheless, in an effort to advance this case to issue, amended the claims as set forth above.

As such, Applicant is claiming a processing of a target area to create sub-target areas. By the ordinary meaning of the term “sub-target area”, which is consistent with the description in the specification at Paragraph [0045], Applicant is claiming a plurality of areas that are *derived from* but are *less than* (“sub-”) the original target area. To arrive at the sub-target areas, processing is performed on the target are by *subdividing the target area* so as to create the plurality of sub-target areas.

As previously mentioned, Applicant believes the original claim language to be fully descriptive of the claimed invention, but has nonetheless amended the claims to include the language “by subdividing said target area” in an effort to further delineate that the sub-target areas are created by subdividing the target area. As such, the sub-target

Appln. No. 10/065,486
Docket No. 124695/GEM-0058

areas are *derived from* the original target area, but are *less in size* ("sub-") than the original target area.

In alleging anticipation of the claimed invention, the Examiner alleges that Barni discloses each and every element of the claimed invention arranged as claimed, including the aforementioned limitation. Paper 20060410, page 3.

Applicant respectfully disagrees.

In alleging anticipation, the Examiner broadly recites the claim limitations, and then provides a listing of the columns and lines in Barni to support the Examiner's allegation.

Applicant respectfully submits that this broad recitation of claim elements, followed by a listing of columns and lines in Barni, merely presents a broad conclusory statement without a showing of where each and every element as set forth in the claims may be found, and is therefore insufficient to establish a prima facie case of anticipation.

Furthermore, in comparing Barni with the claimed invention, particularly at (col. 1, lines 7-15 and 65-67, col. 2, lines 1-51, col. 3, lines 11-30 and 40-58, col. 4, lines 36-67, col. 5, lines 1-60 and Figs. 1-4) as recited by the Examiner, Applicant finds Barni to be specifically absent the claimed limitation of "...processing said target area by subdividing said target area *so as to create a plurality of sub-target areas of interest...*", and the Examiner has not stated with specificity where this limitation may be found in Barni.

At column 2, lines 28-30, Applicant finds Barni to disclose "a medical imager which produces image representations of a region of interest of a patient *at two different temporal resolutions.*"

At column 3, lines 40-43, Applicant finds Barni to disclose "In any event, at least two medical images of the same region of interest are obtained, *one at a relatively higher temporal resolution* (see, e.g. Fig. 2) and *the other at a relatively lower temporal resolution* (see, e.g. Fig. 3)."

As such, Applicant finds Barni to disclose a single region of interest that has two image representations of it at two different temporal resolutions, and to be absent any

Appin. No. 10/065,486
Docket No. 124695/GEM-0058

disclosure of *a target region of interest* being *subdivided* into *a plurality of sub-target areas of interest*.

Accordingly, Applicant submits that Barni does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Barni of each and every element of the claimed invention arranged as in the claim, Barni cannot be anticipatory.

Regarding Independent Claim 24

Claim 24 recites,

“A method *for assigning phases* in images acquired using an imaging system comprising:

operating said imaging system to create image data of an object and generate system data, wherein said system data includes object physiological information and imaging system information corresponding to each respiratory cycle;

processing *said image data and said system data to determine a phase* of said image data; and

synchronizing said image data.”

Dependent claims inherit all of the limitations of the parent claim.

In alleging anticipation, the Examiner remarks that “the reference [Barni] further teaches a method of assigning phases in an image by imaging an object to create image data and system data, where the system data includes physiological information, that is respiratory cycle data, and the imaging system information corresponds to each respiratory cycle...”. Paper 20060410, page 3.

Not only does Applicant respectfully disagree with the Examiner that Barni anticipates the claimed invention as set forth in the claim, but Applicant also respectfully submits that the Examiner has not fully considered each and every element of the claimed invention.

Appln. No. 10/065,486
Docket No. 124695/GEM-0058

For example, the Examiner does not state where Barni discloses “processing *said image data and said system data to determine a phase* of said image data”, nor has the Examiner stated where Barni discloses “*synchronizing said image data*”.

At column 4, lines 53-55, Applicant finds Barni to disclose that “the second image 200 visualizes a range or envelope of movement or motion for the tissue mass...”

Here, Applicant finds Barni to disclosed *a complete envelope of movement*, and not a determination of *a phase of the movement*. As such, Applicant finds Barni to be absent any disclosure of a method for *assigning phases* that includes processing the image data and the system data *to determine a phase* of the image data.

Absent a showing of anticipatory disclosure of each and every element of the claimed invention arranged as claimed, a prima facie case of anticipation cannot be established.

In view of the foregoing remarks, notwithstanding the amendments, Applicant submits that Barni does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner’s rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

Rejections Under 35 U.S.C. §103(a)

Claims 2, 5, 10, 16 and 22, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barni in view of General Electric Company (European Patent No. 1090586, hereinafter EP 1090586).

Regarding Claims 8, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barni in view of Shao et al. (U.S. Patent Application Publication No. 2003/0233039).

Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barni in view of Hu et al. (U.S. Patent No. 6,073,041, hereinafter Hu).

Applicant traverses these rejections for the following reasons.

Appln. No. 10/065,486
Docket No. 124695/GEM-0058

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

All claims rejected under U.S.C. §103(a) are dependent claims that inherit all of the limitations of the respective parent claim, and none of the references used in combination have been applied against the respective parent claims.

Accordingly, and for at least the reasons set forth above, Applicant submits that Claims 2, 5, 8, 10, 16, 17, 22, 23, 25 and 28, are patentable, as Barni fails to teach or suggest each and every element of the claimed invention either arranged as claimed or arranged so as to perform as the claimed invention performs, and Applicant submits that EP 1090586, Shao, and Hu fail to cure the deficiencies of Barni.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the foregoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §101, 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

Appin. No. 10/065,486
Docket No. 124695/GEM-0058

The arguments and amendments presented herein are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. The claims have not been amended to overcome the prior art and therefore, no presumption should attach that either the claims have been narrowed over those earlier presented, or that subject matter or equivalents thereof to which the Applicant is entitled has been surrendered. Allowance of the claims is respectfully requested in view of the above remarks. Moreover, no amendments as presented alter the scope of the claimed invention and therefore cannot necessitate a new grounds rejection.

Appln. No. 10/065,436
Docket No. 124693/GEM-0058

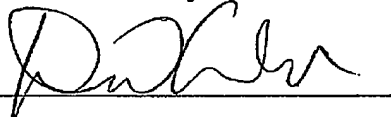
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

CANTOR COLBURN LLP

Applicant's Attorneys

By: 

David Arnold
Registration No: 48,894
Customer No. 23413

Address: 55 Griffin Road South, Bloomfield, Connecticut 06002
Telephone: (860) 286-2929
Fax: (860) 286-0115